

# Electro-Voice®

ELECTRO-VOICE, INC.  
BUCHANAN, MICHIGAN

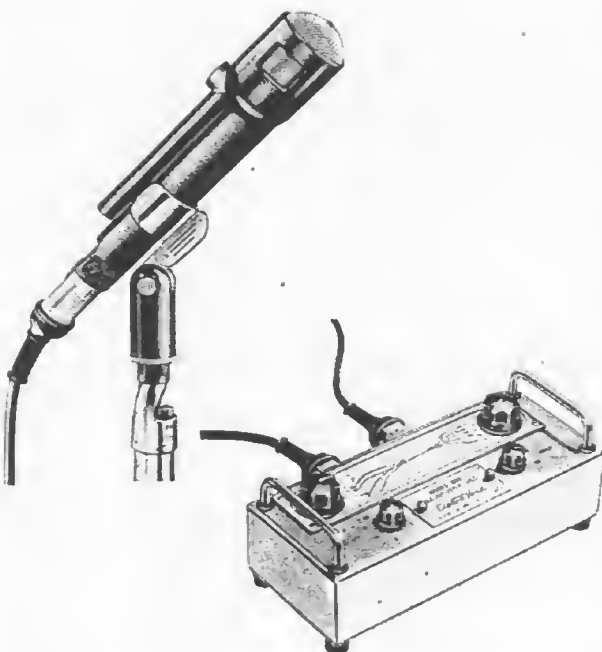


Fig. 1 - Model 667 Microphone and Preamplifier

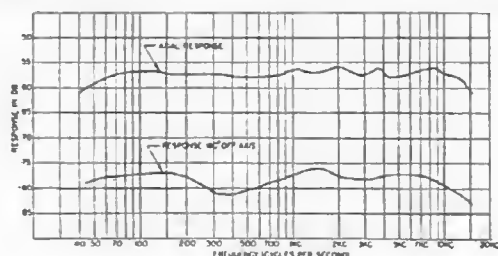


Fig. 2 - Response in Flat Preamplifier Position

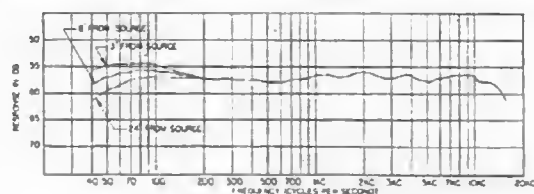


Fig. 3 - Response Change with Varying Distance Showing Minimizing of Proximity Effect

## Specifications

### Model 667 Microphone

The Model 667 is a cardioid microphone of the dynamic type incorporating an in-line transistor preamplifier. The cardioid pattern is obtained through use of three sound entrances located in the microphone case at different distances in back of the diaphragm. These three sound entrances, each utilizing the proper acoustical impedance, combine to form one effective back entrance which varies in distance from the diaphragm inversely with frequency. The resulting phase and amplitude conditions produce a uniform range at the flat position on the preamplifier. This variable front-to-back distance along with dynamic-type construction affords high resistance to mechanical shock and produces virtually no proximity effect. The front-to-back ratio is double to triple that of the average cardioid microphone.

The Model 667 is an all-purpose microphone designed to fulfill requirements of wide-range reproduction under a great variety of conditions. Because of its excellent uniform polar response, it is especially useful in locations where ambient noise and severe reverberation exist. Added gain from the preamplifier plus uniform polar response makes this microphone ideally suited for long-throw boom applications. The Model 667 can also be used on a floor or desk stand or carried in the hand.

The microphone head features the exclusive Electro-Voice Acoustalloy diaphragm. This nonmetallic diaphragm produces smooth response over a wide frequency range and withstands high humidity, temperature extremes, corrosive effects of salt air, and severe mechanical shocks. It is practically indestructible with normal use.

The in-line transistor preamplifier is designed to exhibit an excellent dynamic range. (see specifications) Individual bass and treble controls select any one of twenty frequency response characteristics for exacting applications. Tantalum capacitors, mylar capacitors, and 1% metallic film, low-noise resistors used in critical circuits maximize output stability and low-noise operation. Since transistors and associated equipment are characteristically temperature sensitive, they are housed in protective pots to minimize adverse effects on the dynamic range due to sudden temperature variations. A slight decrease in dynamic range will be effected at operating temperatures greater than 80°F. The preamplifier should be operated at room temperatures never exceeding 90°F. *Temperatures greater than 90°F will not physically harm the preamplifier, but there will be a noticeable decrease in dynamic range.*

The preamplifier section utilizes a Mallory-type TR-115 mercury battery with a maximum operating life of 350 hours. However, for best results, change batteries every 300 hours. To replace the battery, remove the two knurled thumb screws holding the name plate. *Caution note: Observe polarity when inserting.*

If a different length connecting cable is added between the microphone head and preamplifier, ground the cable shield to the "G" pin of the UA-3-12 connector. No shield connection is made on the microphone end. The cable shield lead from the preamplifier to the control console should be connected to the red ground lead at the console end of the cable.

Precision production techniques and individual laboratory calibration of the Model 667 microphone and preamplifier insure uniformity beyond that of the average broadcast microphone.

## SPECIFICATIONS

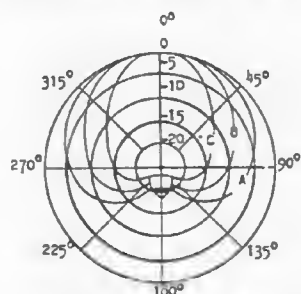
**TYPE:** Cardioid dynamic with transistor preamplifier

**FREQUENCY RESPONSE:** Variable as follows:

Bass - 4 positions: +3db: Flat: -5db: -9db @ 100 cps

Treble - 5 positions: +9db: +6db: +3db: Flat: -6db @ 10 kc

# Electro-Voice Specifications / Model 667 Microphone



Scale: 5 Decibels per division  
 A — 300 cps      B — 5,000 cps  
 C — 10,000 cps

Fig. 4 - Polar Pattern

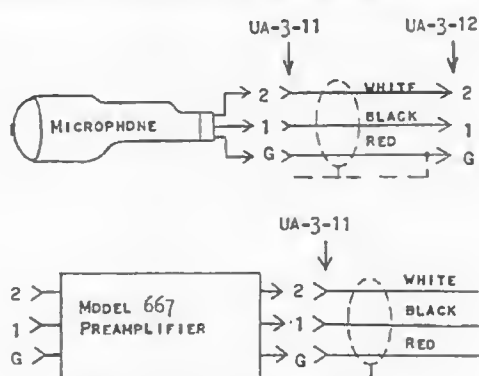
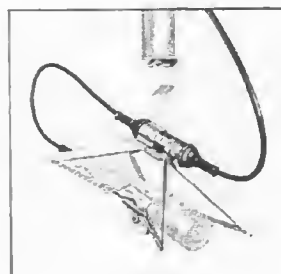


Fig. 5 - Wiring Diagram



Model 667  
in Model 366



Model 667  
on Model 420

**FREQUENCY RESPONSE IN FLAT POSITION:** Uniform from 35 to 16,000 cps.

See. fig. 2

**OUTPUT IMPEDANCE:** Designed to work into 250 ohm, 150 ohm, or 50 ohm circuits.

**OUTPUT LEVELS:** (Re 1 mw/10 dynes/cm<sup>2</sup>)

LOAD IMPEDANCE	DB GAIN CONTROL SETTING			
	20	15	10	5
50 ohm	-30db	-33db	-37db	-41db
150 ohm	-32db	-36db	-41db	-46db
250 ohm	-33db	-38db	-43db	-48db
Open Circuit	-33db	-38db	-43db	-48db

**NOISE LEVEL:** -123dbm referred to input

**BATTERY:** Mallory type TR-115 mercury

**BATTERY LIFE:** Maximum, 350 hours of operation

**OPERATING TEMPERATURE LIMIT:** Transistor preamplifier temperature must be maintained below 90°F while operating.

**DYNAMIC RANGE:** 11000 cps @ 80° F) Re .0002 dynes/cm<sup>2</sup> minimum values

GAIN SETTING	OPEN CRCT.	250 OHM	150 OHM	50 OHM
20	120db	116db	115db	112db
15	120db	118db	117db	115db
10	120db	120db	120db	119db
5	120db	120db	120db	119db

**POLAR PATTERN:** Cardioid. Uniform front-to-back discrimination. See fig. 4

**DIAPHRAGM:** Electro-Voice Acoustelloy

**MAGNETIC CIRCUIT:** Employs Alnico V and Armco magnetic iron in non-welded circuit

**PHASE:** Positive voltage on white cable lead with positive pressure

**PREAMPLIFIER CONTROLS:** Bass frequency control; Treble frequency control; 4 position gain switch; Power, on-off switch

**CASE, MICROPHONE:** Cast aluminum

**FINISH, MICROPHONE:** Brown and gold

**CASE, PREAMPLIFIER:** 18 gage steel

**FINISH, PREAMPLIFIER:** Brushed chrome

**DIMENSIONS:**

**MICROPHONE:**

Diameter: 1-3/4 in. maximum

Length: 7-1/2 in.

**PREAMPLIFIER:**

Length: 9 in.

Width: 3-7/8 in.

Depth: 3-11/32 in.

**NET WEIGHT, MICROPHONE:** 11 oz. without cable

**NET WEIGHT, PREAMPLIFIER:** 3 lb. 4 oz.

**CABLES SUPPLIED:** One 50', 3 conductor shielded, broadcast-type with UA-3-11 and UA-3-12 connectors

One 20', 3 conductor shielded, broadcast-type with UA-3-11 connector

**STANDARD ACCESSORIES** Model 300 microphone clamp, 1/2 in. pipe thread with 5/8 in.-27 adaptor; Suede microphone bag; Walnut finish carrying case for microphone and preamplifier

**OPTIONAL ACCESSORIES:** Model 366 suspension shock mount. Model 420 desk stand

**WARRANTY:** The Electro-Voice Model 667 Microphone is guaranteed against defects in workmanship and material.



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